

What is claimed is:

1. A system for detecting and measuring an analyte in a biological fluid of a animal, comprising:

a harvesting device suitable for positioning on the surface of tissue of an animal to harvest biological fluid therefrom, and comprising an analyte sensor positioned to be contacted by the harvested biological fluid and which generates a measurement signal representative of the analyte;

at least one attribute sensor to measure an attribute associated with the operation of the harvesting device and which generates an attribute signal representative of the attribute; and

a processor coupled to the attribute sensor and the analyte sensor to receive the attribute signal and the measurement signal, wherein the processor adjusts an operational parameter of the harvesting device based on attribute signal.

2. The system of claim 1, wherein the attribute sensor measures an operational parameter of the analyte sensor, and the processor generates an output signal that indicates a measure of an analyte in the biological fluid, compensated for the attribute measured by the attribute sensor.

3. The system of claim 2, wherein the attribute sensor comprises a temperature sensor coupled to the analyte sensor to measure temperature of the analyte sensor.

4. The system of claim 2, wherein the attribute sensor measures the attribute continually.

5. The system of claim 2, wherein processor continually reads the attribute signal and the measurement signal and generates the output signal on a continual basis.

6. The system of claim 2, and further comprising a display coupled to the processor to display a value of the output signal generated by the processor.

7. The system of claim 1, wherein the analyte sensor is a glucose sensor.

8. The system of claim 1, wherein the attribute sensor detects a condition of the tissue indicative of fluid productivity, and wherein the processor generates a

09706030-05201

harvesting biological fluid from the surface of tissue of an animal with a harvesting device;

contacting an analyte sensor with the biological fluid on the tissue surface;
detecting an analyte in the biological fluid with the analyte sensor;
sensing an attribute associated with the operation of the harvesting device; and
adjusting an operational parameter of the harvesting device based on the
attribute.

10. The method of claim 9, and further comprising the step of computing a measurement of the analyte in the biological fluid based on a signal from the analyte sensor, wherein the step of adjusting comprises adjusting the computed measurement based on the attribute.

11. The method of claim 10, wherein the step of sensing an attribute comprises sensing temperature of the analyte sensor.

12. The method of claim 9, wherein the step of sensing an attribute comprises sensing a condition of the issue indicative of fluid productivity, and wherein the step of adjusting comprises adjusting a level of suction applied to the harvesting device for drawing fluid from the tissue into contact with analyte sensor.

13. The method of claim 9, wherein the step of harvesting comprises continually harvesting biological fluid from the surface of tissue, the step of detecting an analyte in a biological fluid of a subject comprises continually detecting the analyte, the step of sensing an attribute comprises continually sensing an attribute proximate to the analyte sensor; and the step of adjusting comprises continually adjusting an operational parameter of the harvesting device.

14. A device suitable for positioning on the surface of tissue of an animal to harvest biological fluid therefrom, and comprising:

an analyte sensor positioned to be contacted by the harvested biological fluid and which generates a measurement signal representative of the analyte; and

at least one attribute sensor to measure an attribute associated with the operation of the harvesting device and which generates an attribute signal representative of the attribute.

15. The device of claim 14, wherein the attribute sensor measures an operational parameter of the analyte sensor.

16. The device of claim 15, wherein the attribute sensor is a temperature sensor that is positioned on the analyte sensor to measure temperature of the analyte sensor.

17. The device of claim 14, wherein the attribute sensor detects a condition of the tissue indicative of fluid productivity.

00786670 052204
102250 0255260